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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,753	09/21/2005	Sumie Suda	278290US0XPCT	1304

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EXAMINER	
FOGARTY, CAITLIN ANNE	

ART UNIT	PAPER NUMBER
1793	

NOTIFICATION DATE	DELIVERY MODE
08/29/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/549,753	SUDA ET AL.	
	Examiner	Art Unit	
	CAITLIN FOGARTY	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 1 – 6 are pending where claim 1 is amended.

Acknowledgement of RCE

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 14, 2008 has been entered.

Status of Previous Rejections

3. The following rejections are maintained:

- Claims 1 – 6 under 35 U.S.C. 103(a) as being unpatentable over Hashimura et al. (US 6,338,763 B1).
- Claims 1 and 2 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 4 of copending Application No. 10/550,019.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimura et al. (US 6,338,763 B1).

Hashimura et al. is applied to claims 1 – 6 as set forth in the April 14, 2008 Office action.

In regards to the amended instant claim 1, the limitation that the ratio ($\sigma_{0.2}/\sigma_B$) of 0.2% proof stress ($\sigma_{0.2}$) to tensile strength (σ_B) is 0.79 no longer overlaps with the ratio ($\sigma_{0.2}/\sigma_B$) of not less than 0.8 disclosed by Hashimura et al. (col. 4 lines 1-14). However, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP 2144.05. The instant application does not recite the criticality of the value of the ratio ($\sigma_{0.2}/\sigma_B$) of 0.79. Therefore, it would be expected that a steel wire with a ratio ($\sigma_{0.2}/\sigma_B$) of 0.8 as disclosed by Hashimura et al. would have very similar properties to the steel wire of the instant invention.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1 and 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 4 of copending Application No. 10/550,019. Although the conflicting claims are not identical, they are not patentably distinct for the reasons discussed in the October 26, 2007 Office action.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

8. Applicant's arguments filed July 14, 2008 have been fully considered but they are not persuasive.

Arguments are summarized as follows:

a. With both the steel wire (i) and the steel wire (ii) of Hashimura, the yield strength ratio is set to be not less than 0.8. This setting is necessary to balance the coiling performance and sag resistance of the disclosed wires. By contrast, the yield strength ratio of the wire of claim 1 is 0.79 or lower. Hashimura teaches away from setting the yield strength ratio as provided in claim 1.

b. The wire of claim 1 is prepared to have a yield strength ratio 0.79 or lower before coiling. It has a low 0.2% proof stress so that it is capable of superior coiling performance (cold workability) relative to convention steel wire. The wire

of claim 1 thus has superior coiling performance (workability) to wire, such as disclosed in Hashimura.

c. Although the yield strength ratio of the wire of claim 1 is lower than the yield strength ratio of the wires of Hashimura, the small grain size employed in the wire of claim 1 effectively improves sag resistance of the wire upon annealing or nitriding after coiling. Hashimura does not disclose or suggest a wire composed as recited in claim 1, or recognize the benefits stemming therefrom.

d. There is nothing in Hashimura that would have led one of ordinary skill in the art to control the yield strength ratio to be 0.79 or lower or to control the grain size number of prior austenite to be 11.0 or larger, as recited in claim 1.

e. Claims 2 – 6 depend from claim 1 and, thus, also would not have been rendered obvious by Hashimura.

Examiner's responses are as follows:

a. Hashimura teaches that the ratio ($\sigma_{0.2}/\sigma_B$) of 0.2% proof stress ($\sigma_{0.2}$) to tensile strength (σ_B) is not less than 0.8 (col. 4 lines 1-14). This does not teach away from the ratio ($\sigma_{0.2}/\sigma_B$) 0.79 recited in instant claim 1 because it is very close to the ratio disclosed by Hashimura. Therefore, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties as discussed in the 35 U.S.C. 103(a) rejection above. See MPEP 2144.05.

b. The instant claims do not recite that the yield strength ratio 0.79 or lower recited in instant claim 1 is *before coiling*. Similarly, the instant claims do not recite that the wire of claim 1 has superior coiling performance. Since these limitations are not recited in the instant claims they do not have patentable weight.

c. Hashimura is not required to recognize the benefits stemming from the small grain size employed in the wire of claim 1 because the benefits are not a claim limitation. See MPEP 2144 IV.

d. The ratio ($\sigma_{0.2}/\sigma_B$) of not less than 0.8 disclosed by Hashimura et al. is very close to the value of the ratio ($\sigma_{0.2}/\sigma_B$) of 0.79 recited in instant claim 1 and is therefore a prima facie case of obviousness as discussed above in the 35 U.S.C. 103(a) rejection. The grain size number is addressed in the October 26, 2007 Office action.

e. Claims 2 – 6 are obvious in view of Hashimura et al. as discussed in the rejection above.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAITLIN FOGARTY whose telephone number is (571)270-3589. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit 1793

CF